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CLOSURE FOR WALL OPENINGS

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3 Claims. (Cl. 16—163)

This invention relates to improvements in closures for wall openings.

More especially it relates to improved means for mounting, enframing and controlling openable closures in a wall, the term "wall" being used herein in a broad sense which includes side walls, floors and ceilings of building structures, cars, boats, etc., and sides, tops and bottoms of containers, cabinets and the like.

The invention will be described herein as it may be employed in connection with doors, openable panels and other closures set with the plane of the face of the panel flush with the plane of the face of the wall. Such a panel may provide access to equipment and apparatus of various descriptions such as, for example, switches for a lighting or power system, and fire extinguishing equipment; or, as another instance, the closure may be one which embodies a lens or glass for projecting or for disseminating light.

In the planning of structures, particularly building structures, rarely, if ever, can number, sizes, proportions, and locations of openable closures be so maneuvered that the closures can be treated successfully as parts of the general design. If they cannot be omitted entirely the one logical alternative is to suppress them so far as this is physically possible. The objective is to carry the wall through with the minimum of apparent interruption, making the frame and the necessary hardware invisible or as nearly invisible as possible.

In attempting to do this, however, there is one ever recurring condition in particular that has not been met satisfactorily. This is the relatively thin plate-type door mounted in a metal frame which, in turn, is to be set flush in plaster, terrazzo, concrete, or in other plastic material. Conspicuity of frame structure has been necessary heretofore, when the frame has had to serve as a plaster retainer at the face of the wall, and it has been desired to have a substantial thickness of plaster engaged back of a portion of the frame. Prior frame structures showing only an inconspicuously thin edge at the plane of the wall face have attained this only by sacrificing the desired plaster-retaining feature at and behind the wall face. But unless the plaster bordering the wall opening is adequately maintained by the frame, at the wall face, shrinkage of the plaster may cause cracks in the plaster adjacent to the frame.

It is among the objects of the present invention to provide a closure frame which can effectively contribute needed support for the bor-

dering plaster, and which can be practically concealed by the plaster and the closure element.

A feature resides in having a thin edged rim portion of the frame for providing the desired metallic border around the closure, at the plane of the wall face, and for protecting the plaster there, which may run up to the said bordering rim; also in having this thin rim extending in continuity all around the opening, except for a single joint which may be effectively obscured, preferably at a corner.

Another feature resides in the provision whereby wall plaster may extend back of the rabbeted seat for the panel, and be held by the said rabbeted portion of the frame.

A further feature resides in a structure for the panel-seating portion of the frame whereby the said bordering rim may be accurately fitted to the panel by being wrapped around the panel during formation.

Another and important object is to provide an improved hinge mount for a closure on my improved frame, having provision for supporting the closure from an accessible interior portion of the frame, and for the projecting of the closure clear of its close fitting frame during initial opening movement, and for the maintaining of it clear of the frame during an opening travel through 180°.

Another object is to combine such a frame and hinges so that the hinges normally may be entirely concealed, and so that the stresses incident to movement of the closure may be distributed through the full distance of inward extent of the frame, thereby to relieve the outer frame region, flanked by the plaster, from a concentration of these stresses.

These various objects and results may be attained by forming the frame as a wall-penetrating shell around whose forward edge extends a flange rabbet to receive the panel. This rabbet constitutes a seat for the panel in a plane parallel to and close to the plane of the wall face; and the wall of the rabbet is a thin surrounding rim that reaches forward to the face of the plaster wall. The rabbet seats the door, serves as a metal "screed", or straight-edge, for plastering, and constitutes a metal trim to bound, hold, confine and protect the plaster. In result, the plaster appears to be co-extensive with the bound and to extend practically to the edge of the closure element, the thin metal rebate lending a much needed sharpness and firmness of delimitation to the plaster opening.

The joint between plaster-and-frame is thus